

What is claimed is:

1. A method of treating diabetes in a patient, the method comprising administering to the patient a hydroxylated amino acid and one or more additional antidiabetic agents.

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2. The method of claim 1, wherein the hydroxylated amino acid is 4-hydroxyisoleucine.

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3. The method of claim 2, wherein the 4-hydroxyisoleucine is the 2S,3R,4S isomer of 4-hydroxyisoleucine.

4. The method of claim 1, wherein the additional antidiabetic agent is insulin.

5. The method of claim 1, wherein the additional antidiabetic agent is a biguanide.

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6. The method of claim 5, wherein the biguanide is metformin.

7. The method of claim 1, wherein the additional antidiabetic agent is a sulfonylurea drug.

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8. The method of claim 1, wherein the additional antidiabetic agent is a glinide.

9. The method of claim 1, wherein the additional antidiabetic agent is a thiazolidinedione.

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10. The method of claim 9, wherein the thiazolidinedione is rosiglitazone maleate or pioglitazone.

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11. The method of claim 1, wherein the additional antidiabetic agent is a glucagon-like peptide 1 receptor agonist.

12. The method of claim 11, wherein the glucagon-like peptide 1 receptor agonist is Exenatide®.

13. The method of claim 1, wherein the hydroxylated amino acid is administered to the patient at or about the same time as the additional antidiabetic agent.

14. The method of claim 1, wherein the diabetes is type 2 diabetes.

15. A pharmaceutical kit comprising a hydroxylated amino acid and one or more additional antidiabetic agents.

16. The pharmaceutical kit of claim 15, wherein the hydroxylated amino acid is 4-hydroxyisoleucine.

17. The pharmaceutical kit of claim 16, wherein the 4-hydroxyisoleucine is the 2S,3R,4S isomer of 4-hydroxyisoleucine.

18. The pharmaceutical kit of claim 15, wherein the additional antidiabetic agent is insulin.

19. The pharmaceutical kit of claim 15, wherein the additional antidiabetic agent is a biguanide.

20. The pharmaceutical kit of claim 19, wherein the biguanide is metformin.

21. The pharmaceutical kit of claim 15, wherein the additional antidiabetic agent is a sulfonylurea drug.

22. The pharmaceutical kit of claim 15, wherein the additional antidiabetic agent is a glinide.

23. The pharmaceutical kit of claim 15, wherein the additional antidiabetic agent is a thiazolidinedione.

24. The pharmaceutical kit of claim 23, wherein the thiazolidinedione is rosiglitazone maleate or pioglitazone.

25. The pharmaceutical kit of claim 15, wherein the additional antidiabetic agent is a glucagon-like peptide 1 receptor agonist.

5 26. The pharmaceutical kit of claim 25, wherein the glucagon-like peptide 1 receptor agonist is Exenatide®.

27. The pharmaceutical kit of claim 15, wherein the hydroxylated amino acid and the additional antidiabetic agent are formulated into a single composition.

10 28. The pharmaceutical kit of claim 27, wherein the single composition is a tablet or a capsule.